

--Figure 1: Schematic representation of the aptamers TIP (SEQ ID NO: 2) and TIP 12/1 (SEQ ID NO: 3) showing the peptide sequences inserted between G³³ and P³⁴ of E.coli thioredoxin. Deviations from the p53 wt sequence in TIP 12/1 (SEQ ID NO: 3) are in bold with the non exchangeable amino acids underlined. The 3D structure for thioredoxin was obtained from the Protein Data Bank (PDB), Brookhaven National Laboratory and displayed using the public domain program RasMol.--

In the Claims:

1. (Currently amended) A method for ~~the prevention or treatment of a condition associated with the binding of mdm2 to p53 in inducing growth inhibition of apoptosis in a population of cells in which mdm2 is not overexpressed, comprising administering to an individual a prophylactically or therapeutically effective amount of the cells~~ an agent having the property of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2.
2. (Previously amended) The method of claim 1 wherein the p53 is activated for DNA specific binding and transcription.
3. (Currently amended) The method of claim 1 wherein the agent comprises a peptide having an amino acid sequence ~~corresponding to that consists of, or that is a variant of, a portion of~~ human p53 which has the property of binding to mdm2.
4. (Currently amended) The method of claim 3 wherein the peptide is less than 25 amino acids in length and has an amino acid sequence having at least 70% amino acid sequence identity with a ~~corresponding~~ portion of human p53.
5. (Previously amended) The method of claim 3 wherein the agent includes the peptide motif FXaaXaaXaaW (SEQ ID NO: 4), where Xaa is any amino acid.

6. (Previously amended) The method of claim 1 wherein the agent has the property of binding to one or more regions of mdm2 involved in binding to p53.

7. (Previously amended) The method of claim 6 wherein the agent is an antibody which is capable of blocking a p53 binding site of mdm2.

8. (Previously amended) The method of claim 1 wherein the agent has the property of competing with mdm2 for binding p53, but does not inhibit a biological activity of p53.

9. (Previously amended) The method of claim 8 wherein the agent is an antibody capable of blocking a mdm2 binding site of p53.

10. (Previously amended) The method of claim 1 wherein the agent is an antisense oligonucleotide capable of inhibiting the synthesis of mdm2 in the population of cells.

11. (Currently amended) The method of claim 1 wherein the ~~medicament is for the treatment of cells are cancer cells, a viral virally infected cells condition or other condition associated with cells having non functional p53 or mdm2.~~

12. (Original) A method of activating p53 comprising exposing a population of cells to an agent having the property of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2 so that p53 in the cells is activated, wherein the cells do not overexpress mdm2.

13. (Original) The method of claim 12 wherein the p53 is activated for DNA specific binding and transcription.

14. (Currently amended) The method of claim 12 wherein the agent comprises a peptide having an amino acid sequence ~~corresponding to that consists of, or that is a variant of, a portion of~~ human p53 which has the property of binding to mdm2.

15. (Currently amended) The method of claim 12 wherein the peptide is less than 25 amino acids in length and has an amino acid sequence having at least 70% amino acid sequence identity with a ~~corresponding~~ portion of human p53.

16. (Previously amended) The method of claim 12 wherein the agent includes the peptide motif FXaaXaaXaaW (SEQ ID NO: 4), where Xaa is any amino acid.

17. (Previously amended) The method of claim 12 wherein the agent has the property of binding to one or more regions of mdm2 involved in binding to p53.

18. (Original) The method of claim 17 wherein the agent is an antibody which is capable of blocking a p53 binding site of mdm2.

19. (Previously amended) The method of claim 12 wherein the agent has the property of competing with mdm2 for binding p53, but does not inhibit a biological activity of p53.

20. (Original) The method of claim 19 wherein the agent is an antibody capable of blocking a mdm2 binding site of p53.

21. (Previously amended) The method of claim 12 wherein the agent is an antisense oligonucleotide capable of inhibiting the synthesis of mdm2 in the population of cells.

22. (Original) A method of screening test substances for the property of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2, the method comprising employing cells which do not overexpress mdm2, the cells being transfected with a reporter construct comprising nucleic acid encoding a reporter polypeptide under the control of promoter elements that respond to the level of p53 activated for DNA specific binding to direct expression of the reporter polypeptide, the

method comprising exposing the cells to the candidate substances and detecting the presence of the reporter polypeptide.

23. (Original) The method of claim 22 wherein test substances are peptides and the cells are transfected with an expression vector comprising nucleic acid encoding the peptides so that the peptide is expressed in the cells.

24. (Previously amended) The method of claim 22 wherein the test substances are expressed as fusion with a peptide capable of displaying the test peptide in a particular conformation.

25. (Original) The method of claim 24 wherein the peptides are expressed as fusion with thioredoxin.

26. (Original) The method of claim 22 wherein the test substances are microinjected into the cells.

27. (Original) The method of claim 22 wherein the test substances are coupled to transport molecules so that test substances are transported into the cells.

28. (Currently added) The method of claim 12 wherein the cells are cancer cells, virally infected cells or other cells having non functional p53 or mdm2.

Remarks/Arguments

The foregoing amendments in the claims are of formal nature and are fully supported by the specification as originally filed. Newly added claim 28 is supported, at least, by original claim 11.

Turning to the Office Action, prior to entry of the foregoing amendment, claims 1-27 were pending. Claims 5-10 and 12-27 have been withdrawn from consideration as a result of a new restriction requirement. Claims 1-4 and 11 have been rejected.